

Amendments to the Specification:

Please replace the title of the application with the following: Flexible Membrane Encapsulated Strain Measurement Instrument.

Please replace the paragraph beginning at page 7, line 10, with the following rewritten paragraph:

Fig. 2 is a partial section view of instrumented membrane for axial measurements only with a specimen in place;

Please replace the paragraph beginning at page 8, line 7, with the following rewritten paragraph:

Fig. 1 shows the straight tube portion 52A of the membrane and Fig. 2 shows a section view through the membrane and one of the vertical measurement instruments. Fig. 2 also shows a specimen 36 to be tested in the axial direction. In a constant thickness version of the membrane, the thickness of 52A in Fig. 1 is thicker than the cross section dimension of the displacement sensor, which requires its minimum thickness to be larger than that necessary to produce the pressure barrier alone. The thickness may vary in other embodiments, such as that produced by the fabrication mold assembly, discussed below in the manufacturing method portion of

this application. The membrane section shown in Fig.s 1 and 2 show a cavity 52B that is molded into the membrane material, such as silicone or latex rubber, or other polymeric materials, and this cavity receives the LVDT (linear variable differential transformer) type displacement transducer. The cavity 52B is tubular in nature, but it is not centered within the wall thickness of the membrane. By offsetting the cavity toward the outside surface of the membrane, the large diameter portions of the cavity are actually open to the outside surface of the membrane by the slit 52C in Fig. 1.